Amendments to the Claims

Please amend the claims to read as follows:

1. (Original) A method of promoting lipid mobilization in a human, the method comprising administering an insect adipokinetic hormone to the human in an amount effective to mobilize lipids in the human.

2. (Original) The method of claim 1, wherein the hormone has a molecular weight less than 2500.

3. (Original) The method of claim 1, wherein the hormone is a polypeptide having a pyroglutamate residue at its amino terminus.

4. (Original) The method of claim 1, wherein the hormone is a polypeptide having a blocked carboxyl terminus.

5. (Amended) The method of claim 4, wherein the carboxyl terminus of the polypeptide is ~~aminated~~ amidated.

6. (Original) The method of claim 1, wherein the hormone is a polypeptide that does not have internal disulfide bonds.

7. (Original) The method of claim 1, wherein the hormone is characterized in that its ability to promote lipid mobilization is not significantly inhibited by propanolol.

8. (Amended) The method of claim 1, wherein the hormone is a polypeptide characterized in that:

i) it has a molecular weight less than 2500;

ii) it has a pyroglutamate residue at its amino terminus;

iii) it is ~~aminated~~ amidated at its carboxyl terminus;

iv) it does note have internal disulfide bonds; and

v) its ability to promote lipid mobilization is not significantly inhibited by propanolol.

9. (Original) The method of claim 1, wherein the hormone has the chemical structure

$$Xaa^1 - Xaa^2 - Xaa^3 - Xaa^4 - Xaa^5 - Xaa^6 - Xaa^7 - Xaa^8 - X - Z,$$

wherein:

Xaa^1 is a pyroglutamate residue;

Xaa^2 is one of a leucine residue, an isoleucine residue, a valine residue, a phenylalanine residue, and a tyrosine residue;

Xaa^3 is one of an asparagine residue and a threonine residue;

Xaa^4 is one of a phenylalanine residue and a tyrosine residue;

Xaa^5 is one of a threonine residue and a serine residue;

Xaa^6 is one of a proline residue, a serine residue, a threonine residue, and an alanine residue;

Xaa^7 is one of glycine residue, an asparagine residue, a serine residue, an aspartate residue, a valine residue, and a tryptophan residue;

Xaa^8 is a tryptophan residue;

X is from 0 to 10 amino acid residues; and

Z is one of a hydrogen radical and a carboxyl terminus-blocking moiety.

10. (Original) The method of claim 9, wherein:

Xaa^2 is one of a leucine residue, and a valine residue;

Xaa^6 is a proline residue, a serine residue, and a threonine residue;

Xaa^7 is one of glycine residue, an asparagine residue, and a serine residue;

Xaa^8 is a tryptophan residue;

X is from 0 to 3 amino acid residues; and

Z is an ($-NH_2$) radical.

11. (Original) The method of claim 10, wherein Xaa^4 is a phenylalanine residue.

12. (Original) The method of claim 9, wherein:

X is 0 amino acid residues; and

Z is an ($-NH_2$) radical.

13. (Original) The method of claim 9, wherein X is a glycine residue.

14. (Original) The method of claim 13, wherein Z is an ($-NH_2$) radical.

15. (Original) The method of claim 9, wherein X has the chemical structure

$$Xaa^9 - Xaa^{10}$$

wherein:

Xaa^9 is glycine; and

Xaa^{10} is one of a threonine residue, a glycine residue, a tryptophan residue, a serine residue, and an asparagine residue.

16. (Original) The method of claim 15, wherein Xaa^{10} is a threonine residue.

17. (Original) The method of claim 15, wherein Z is an ($-NH_2$) radical.

18. (Original) The method of claim 9, wherein X has the chemical structure

$$Xaa^9 - Xaa^{10} - Xaa^{11}$$

wherein:

Xaa^9 is glycine;

Xaa^{10} is one of a threonine residue, a glycine residue, a tryptophan residue, a serine residue, and an asparagine residue; and

Xaa^{11} is a lysine residue.

19. (Original) The method of claim 9, wherein X has the chemical structure

$$Xaa^{9} - Xaa^{10} - Xaa^{11} - (Xaa^{12})_{n}$$

wherein

n is from 0 to 7

Xaa^{9} is a glycine residue,

Xaa^{10}, when present, is one of a threonine residue, a glycine residue, a tryptophan residue, a serine residue, and an asparagine residue;

Xaa^{11}, when present, is a lysine residue; and

each Xaa^{12}, when present, is any amino acid residue.

20. (Original) The method of claim 9, wherein X is a glycine residue and Z is a hydrogen radical.

21. (Original) The method of claim 9, wherein the hormone is administered in an amount in the range from 100 milligrams to about 2 grams per day.

22. (Original) The method of claim 21, wherein the hormone is administered in an amount in the range from 200 milligrams to 1.0 gram per day.

23. (Original) The method of claim 1, wherein the hormone has the chemical structure

$$Xaa^{1} - Xaa^{22} - Xaa^{23} - Xaa^{24} - Xaa^{25} - Xaa^{26} - Xaa^{27} - Xaa^{28} - X - Z,$$

wherein:

Xaa^{1} is a pyroglutamate residue;

Xaa^{22} is an amino acid residue having a non-polar side chain;

Xaa^{23} is an amino acid residue having a non-ionic polar side chain;

Xaa^{24} is an amino acid residue having an aromatic side chain;

Xaa^{25} is an amino acid residue having a non-ionic polar side chain;

Xaa^{26} is any amino acid residue;

Xaa^{27} is any amino acid residue;

Xaa^{28} is an amino acid residue having an aromatic side chain;

X is from 0 to 10 amino acid residues; and

Z is one of a hydrogen radical and a carboxyl terminus-blocking moiety.

24. (Original) The method of claim 23, wherein:

Xaa^{26} is one of a proline residue, a serine residue, a threonine residue, and an alanine residue.

25. (Original) The method of claim 23, wherein:

Xaa^{27} is one of glycine residue, an asparagine residue, a serine residue, a glutamate residue, a valine residue, and a tryptophan residue.

26. (Original) The method of claim 23, wherein Z is an ($-NH_2$) radical.

27. (Original) The method of claim 26, wherein X is 0 amino acid residues.

28. (Original) The method of claim 23, wherein X is a glycine residue and Z is a hydrogen radical.

29. (Original) The method of claim 1, wherein the hormone is a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 1-40, wherein the amino-terminal glutamate residue of the polypeptide is a pyroglutamate residue, and wherein the carboxyl terminal residue of the polypeptide is amidated.

30. (Original) A method of promoting lipid mobilization in a human, the method comprising administering to the human, in an amount effective to mobilize lipids in the human, a compound having the chemical structure

$$Xaa^1 - Xaa^2 - Xaa^3 - Xaa^4 - Xaa^5 - Xaa^6 - Xaa^7 - Xaa^8 - X - Z,$$

wherein:

Xaa^1 is a pyroglutamate residue;

Xaa^2 is one of a leucine residue, an isoleucine residue, a valine residue, a phenylalanine residue, and a tyrosine residue;

Xaa^3 is one of an asparagine residue and a threonine residue;

Xaa^4 is one of a phenylalanine residue and a tyrosine residue;

Xaa^5 is one of a threonine residue and a serine residue;

Xaa^6 is one of a proline residue, a serine residue, a threonine residue, and an alanine residue;

Xaa^7 is one of glycine residue, an asparagine residue, a serine residue, an aspartate residue, a valine residue, and a tryptophan residue;

Xaa^8 is a tryptophan residue;

X is from 0 to 10 amino acid residues; and

Z is one of a hydrogen radical and a carboxyl terminus-blocking moiety.

31. (Original) A method of promoting lipid mobilization in a human, the method comprising administering to the human, in an amount effective to mobilize lipids in the human, a compound having the chemical structure

$$Xaa^1 - Xaa^{22} - Xaa^{23} - Xaa^{24} - Xaa^{25} - Xaa^{26} - Xaa^{27} - Xaa^{28} - X - Z,$$

wherein:

Xaa^1 is a pyroglutamate residue;

Xaa^{22} is an amino acid residue having a non-polar side chain;

Xaa^{23} is an amino acid residue having a non-ionic polar side chain;

Xaa^{24} is an amino acid residue having an aromatic side chain;

Xaa^{25} is an amino acid residue having a non-ionic polar side chain;

Xaa^{26} is any amino acid residue;

Xaa^{27} is any amino acid residue;

Xaa^{28} is an amino acid residue having an aromatic side chain;

X is from 0 to 10 amino acid residues; and

Z is one of a hydrogen radical and a carboxyl terminus-blocking moiety.

32-35. (Canceled)

36. (Original) A method of promoting weight loss in a human, the method comprising administering an insect adipokinetic hormone to the human in an amount effective to mobilize lipids in the human.

37. (Original) The method of claim 36, wherein the human is afflicted with obesity.

38. (Original) A method of suppressing the appetite of a human, the method comprising administering an insect adipokinetic hormone to the human in an amount effective to mobilize lipids in the human, whereby the human's appetite is suppressed.

39 - 44. (Canceled)

45. (Original) A method of promoting lipid mobilization in a human, the method comprising administering an insect adipokinetic hormone to the human in an amount effective to mobilize lipids in the human, wherein the hormone has the chemical structure

$$Xaa^1 - Xaa^3 - Xaa^4 - Xaa^5 - Xaa^6 - Xaa^7 - Xaa^8 - Z,$$

wherein:

Xaa^1 is a pyroglutamate residue;

Xaa^3 is one of an asparagine residue and a threonine residue;

Xaa^4 is one of a phenylalanine residue and a tyrosine residue;

Xaa^5 is one of a threonine residue and a serine residue;

Xaa^6 is one of a proline residue, a serine residue, a threonine residue, and an alanine residue;

Xaa^7 is one of glycine residue, an asparagine residue, a serine residue, an aspartate residue, a valine residue, and a tryptophan residue;

Xaa^8 is a tryptophan residue; and

Z is one of a hydrogen radical and a carboxyl terminus-blocking moiety.

46. (Original) A method of promoting lipid mobilization in a human, the method comprising administering an insect adipokinetic hormone to the human in an amount effective to mobilize lipids in the human, wherein the hormone has the chemical structure

$$Xaa^1 - Xaa^3 - Xaa^4 - Xaa^5 - Xaa^6 - Lys - Z,$$

wherein:

Xaa^1 is a pyroglutamate residue;

Xaa^3 is one of an asparagine residue and a threonine residue;

Xaa^4 is one of a phenylalanine residue and a tyrosine residue;

Xaa^5 is one of a threonine residue and a serine residue;

Xaa^6 is one of a proline residue, a serine residue, a threonine residue, and an alanine residue; and

Z is one of a hydrogen radical and a carboxyl terminus-blocking moiety.

47. (New) The method of claim 1, wherein the hormone is a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 1, 2, 3, 4, and 11.

48. (New) The method of claim 1, wherein the hormone is a polypeptide having the amino acid sequence SEQ ID NO: 4.

49. (New) The method of claim 36, wherein the hormone is a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 1, 2, 3, 4, and 11.

50. (New) The method of claim 36, wherein the hormone is a polypeptide having the amino acid sequence SEQ ID NO: 4.

51. (New) The method of claim 30, wherein the hormone is a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 1, 2, 3, 4, and 11.

52. (New) The method of claim 30, wherein the hormone is a polypeptide having the amino acid sequence SEQ ID NO: 4.

53. (New) The method of claim 31, wherein the hormone is a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 1, 2, 3, 4, and 11.

54. (New) The method of claim 31, wherein the hormone is a polypeptide having the amino acid sequence SEQ ID NO: 4.